

MOLECULAR KINETICS THEORY

Choose just one answer

1.– What happens to particles when they are heated?

- A) They move less
- B) They get bigger
- C) They move around more
- D) They get smaller

2.– A metal bar is 100 cm long. It is heated for 1 hour. What could be the new length of the bar?

- A) 102 cm
- B) 98 cm
- C) 99 cm
- D) 99,2 cm

3.– Which state of matter expands the most on heating?

- A) Gas
- B) Lliquid
- C) Solid
- D) Metals

4.– Which state of matter expands the least on heating?

- A) Gas
- B) Lliquid
- C) Solid
- D) Mercury

5.– Why are there gaps between railways tracks?

- A) To allow for contraction
- B) Because it's cheaper
- C) To allow for expansion
- D) It makes it easier to repair one section of the track

New Words:

Answer all parts of all questions

Consider the following statements and decide whether each one is true or false and why.

- A) In gases the particles move more slowly than the particles in liquids
- B) The particles in gases and liquids can diffuse
- C) The pressure inside a football is caused by the air particles inside the ball crashing into the wall of the football
- D) If a balloon is gently warmed the particles lose energy and begin to move more slowly
- E) If an iron bar is heated in an oven the particles in the iron bar become larger.

Complete the passage below

In gases the _____ are moving very quickly in all _____. A stink bomb can be smelt from the other side of a room because of _____. Scent particles from the stink bomb evaporate and turn into a _____. These scent particles then bump into _____ particles and are eventually spread through the whole room. People close to the stink bomb will smell it first because it takes the scent particles _____ time to diffuse through the air of them.

Diffusion also occurs in _____. However in liquids, although the liquids _____ are able to move relative to each other, they are not moving as fast as the particles in gases _____. This means that liquids can diffuse, but they do so more slowly than the particles in _____.

Michellin is pumping up a wheel.

- A) Explain how the gas particles inside the tyre cause pressure to be exerted on the walls of the tyre.



- B) Michellin notices that as he pumps up his football it feels slightly warmer.

a) What sort of energy have the air particles gained?

b) Explain how the motion of air particles changed as the tyre became warmer

- C) If Michellin places the wheel in a fridge, the air inside the tyre becomes colder and the pressure inside the tyre changes.

a) Explain what happens to the pressure inside the football as the air particles get colder

b) Explain why the change in the pressure occurs when the ball is cooled, in terms of the movement of air particles.